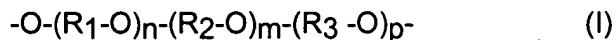


What is claimed is:

1. A medical device comprising: a poly(oxyalkylene)-containing polymeric material and a biocompatible organic multi-acid or biocompatible salt thereof, wherein the poly(oxyalkylene)-containing polymeric material has a polymer network having at least one unit of formula (I)



wherein R_1 , R_2 , and R_3 , independently of one other, are each linear or branched $\text{C}_2\text{-}\text{C}_4$ -alkylene, and n , m and p , independently of one another, are each a number from 0 to 100, wherein the sum of $(n+m+p)$ is 5 to 1000; wherein the biocompatible organic multi-acid or biocompatible salt thereof is distributed within the poly(oxyalkylene)-containing polymeric material but not crosslinked to the polymer network, and wherein the biocompatible organic multi-acid or biocompatible salt thereof is present in an amount effective to improve the stability of the medical device so that the medical device has a decreased susceptibility to oxidative degradation, characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products.

2. A medical device of claim 1, wherein the medical device is an ophthalmic device.
3. A medical device of claim 1, wherein the biocompatible organic multi-acid is selected from the group consisting of hydroxy diacids, hydroxy triacids, and amino acids.
4. A medical device of claim 3, wherein the biocompatible organic multi-acid is an α -oxo-multi-acid.
5. A medical device of claim 4, wherein the α -oxo-multi-acid is selected from the group consisting of citric acid, 2-ketoglutaric acid, and malic acid.
6. A medical device of claim 5, wherein the medical device of the invention is a copolymerization product of a composition comprising (a) a prepolymer containing ethylenically unsaturated groups and at least one poly(oxyalkylene) unit of formula (I); (b) a water-soluble and biocompatible organic multi-acid or biocompatible salt thereof in an amount sufficient to improve the stability of a poly(oxyalkylene)-containing polymeric material made from the composition; (c) optionally a photoinitiator or a thermal initiator; and (d) optionally one or more vinylic monomers.
7. A medical device of claim 6, wherein the prepolymer is a crosslinkable polyurea.
8. A medical device of claim 6, wherein the prepolymer is a crosslinkable polyurethane.

9. A medical device of claim 6, wherein the medical device is an ophthalmic device.
10. A medical device of claim 5, wherein the biocompatible organic multi-acid or biocompatible salt thereof is impregnated within the poly(oxyalkylene)-containing polymeric material, wherein the poly(oxyalkylene)-containing polymeric material is a polymerization product of a reactive mixture comprising (a) a monomer or prepolymer having at least one poly(oxyalkylene) unit of formula (I) and functional groups which are amino, hydroxyl or isocyanato groups, and (b) an organic diamine, an organic polyamine, an organic diol, an organic polyol, an organic diisocyanate, or organic polyisocyanate, provided that components (a) and (b) react with each other to form a polyurea and/or polyurethane network.
11. A medical device of claim 10, wherein the medical device is an ophthalmic device.
12. A method for producing a medical device, comprising the steps of:
 - (1) obtaining a polymerizable fluid composition comprising (a) a prepolymer having ethylenically unsaturated groups and at least one poly(oxyalkylene) unit of formula (I)
$$\text{-O-(R}_1\text{-O)}_n\text{-(R}_2\text{-O)}_m\text{-(R}_3\text{-O)}_p\text{-} \quad (\text{I})$$
wherein R₁, R₂, and R₃, independently of one other, are each linear or branched C₂-C₄-alkylene, and n, m and p, independently of one another, are each a number from 0 to 100, wherein the sum of (n+m+p) is 5 to 1000, (b) a biocompatible organic multi-acid or biocompatible salt thereof, (c) optionally a photoinitiator or a thermal initiator, and (d) optionally one or more vinylic monomers;
 - (2) introducing an amount of the polymerizable fluid composition in a mold for making the medical device; and
 - (3) actinically or thermally polymerizing the polymerizable fluid composition in the mold to form the medical device having a polymer network having at least one unit of formula (I) and the biocompatible organic multi-acid or biocompatible salt thereof which is not crosslinked to the polymer network, wherein the biocompatible organic multi-acid or biocompatible salt thereof is present in an amount effective to improve the stability of the medical device so that the medical device has a decreased susceptibility to oxidative degradation characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products.
13. The method of claim 12, wherein the medical device is an ophthalmic device.

14. The method of claim 13, wherein the biocompatible organic multi-acid is selected from the group consisting of hydroxy diacids, hydroxy triacids, olefinic diacids, olefinic tri-acids, and amino acids.
15. The method of claim 14, wherein the biocompatible organic multi-acid is an α -oxo-multi-acid.
16. The method of claim 15, wherein the α -oxo-multi-acid is selected from the group consisting of citric acid, 2-ketoglutaric acid, and malic acid.
17. The method of claim 15, wherein the prepolymer is a crosslinkable polyurea
18. The method of claim 15, wherein the prepolymer is a crosslinkable polyurethane.
19. The method of claim 16, further comprising the steps of removing the medical device from the mold and hydrating the medical device in an aqueous solution containing the α -oxo-multi-acid or biocompatible salt thereof.
20. The method of claim 19, wherein the aqueous solution has an osmolarity of about 200 to 450 milli-osmole in 1000 ml (unit: mOsm/ml).
21. The method of claim 15, further comprising a step of sterilizing the medical device in an aqueous solution containing the α -oxo-multi-acid or biocompatible salt thereof.
22. The method of claim 21, wherein the aqueous solution has an osmolarity of about 200 to 450 milli-osmole in 1000 ml (unit: mOsm/ml).
23. A method for producing a medical device, comprising the steps of:
 - (1) introducing a reactive mixture into a mold by using a Reaction Injection Molding (RIM) process to form the medical device, wherein the reactive mixture comprises
 - (a) a monomer or prepolymer having functional groups and at least one poly(oxyalkylene) unit of formula (I)
$$-\text{O}-(\text{R}_1\text{-O})_n-(\text{R}_2\text{-O})_m-(\text{R}_3\text{-O})_p-$$
(I)in which R_1 , R_2 , and R_3 , independently of one other, are each linear or branched $\text{C}_2\text{-C}_4$ -alkylene, and n , m and p , independently of one another, are each a number from 0 to 100, wherein the sum of $(n+m+p)$ is 5 to 1000, wherein the functional groups are amino, carboxy, hydroxy or isocyanato groups, and
 - (b) an organic diamine, an organic polyamine, an organic diacid, an organic polyacid, an organic diol, an organic polyol, an organic diisocyanate, or organic polyisocyanate, provided that components (a) and (b) react with each other to form a polyurea and/or polyurethane network;

- (2) removing the medical device from the mold; and
- (3) impregnating the medical device with a biocompatible organic multi-acid or biocompatible salt thereof in an amount effective to improve the stability of the medical device so that the medical device has a decreased susceptibility to oxidative degradation characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products.

24. The method of claim 23, wherein the medical device is an ophthalmic device.

25. The method of claim 24, wherein the biocompatible organic multi-acid is an α -oxo-multi-acid.

26. The method of claim 25, wherein the impregnating step is achieved by immersing the medical device for a period of time in an aqueous solution containing the α -oxo-multi-acid or biocompatible salt thereof.

27. The method of claim 24, wherein the reactive mixture further comprises one or more prepolymers having ethylenically unsaturated groups or one or more vinylic monomers to form a different polymer network which interpenetrates the polyurea and/or polyurethane network.

28. A stabilized poly(oxyalkylene)-containing polymeric material, comprising:

- (a) a polymer network having at least one unit of formula (I)
$$\text{-O-(R}_1\text{-O)}_n\text{-(R}_2\text{-O)}_m\text{-(R}_3\text{-O)}_p\text{-} \quad (\text{I})$$
wherein R₁, R₂, and R₃, independently of one other, are each linear or branched C₂-C₆-alkylene, and n, m and p, independently of one another, are each a number from 0 to 100, wherein the sum of (n+m+p) is 5 to 1000; and
- (b) a biocompatible organic multi-acid or biocompatible salt thereof present in an amount sufficient to improve the stability of the poly(oxyalkylene)-containing polymeric material, which is distributed within the polymeric material but not crosslinked to the polymer network.

29. The stabilized poly(oxyalkylene)-containing polymeric material of claim 28, wherein the biocompatible organic multi-acid is selected from the group consisting of hydroxy diacids, hydroxy triacids, and amino acids.

30. The stabilized poly(oxyalkylene)-containing polymeric material of claim 28, wherein the biocompatible organic multi-acid is an α -oxo-multi-acid.

31. The stabilized poly(oxyalkylene)-containing polymeric material of claim 30, wherein the α -oxo-multi-acid is selected from the group consisting of citric acid, 2-ketoglutaric acid, and malic acid.
32. The stabilized poly(oxyalkylene)-containing polymeric material of claim 30, wherein the stabilized poly(oxyalkylene)-containing polymeric material is a copolymerization product of a composition comprising: (a) a prepolymer containing ethylenically unsaturated groups and at least one unit of formula (I); and (b) the α -oxo-multi-acid or biocompatible salt thereof in an amount effective to improve the stability of the medical device so that the medical device has a decreased susceptibility to oxidative degradation characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products.
33. The stabilized poly(oxyalkylene)-containing polymeric material of claim 30, wherein the stabilized poly(oxyalkylene)-containing polymeric material is a poly(oxyalkylene)-containing polymeric material impregnated with the α -oxo-multi-acid or biocompatible salt thereof in an amount effective to improve the stability of the medical device so that the medical device has a decreased susceptibility to oxidative degradation characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products, wherein the poly(oxyalkylene)-containing polymeric material is a copolymerization product of a composition comprising: (a) a prepolymer containing ethylenically unsaturated groups and at least one unit of formula (I) and (b) optionally one or more vinylic monomers.
34. The stabilized poly(oxyalkylene)-containing polymeric material of claim 30, wherein the stabilized poly(oxyalkylene)-containing polymeric material is a poly(oxyalkylene)-containing polymeric material impregnated with the α -oxo-multi-acid or biocompatible salt thereof in an amount effective to improve the stability of the medical device so that the medical device has a decreased susceptibility to oxidative degradation characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products, wherein the poly(oxyalkylene)-containing polymeric material is polymerization product of a reactive mixture, wherein the reactive mixture comprises (a) a monomer or prepolymer having at least one poly(oxyalkylene) unit of formula (I) and functional groups which are amino, carboxy, hydroxyl or isocyanato groups and (b) an organic diamine, an organic polyamine, an organic diacid, an organic polyacid, an organic diol, an organic polyol, an organic diisocyanate, or organic

polyisocyanate, provided that components (a) and (b) react with each other to form a polyurea and/or polyurethane network.

35. A method for sterilizing a medical device having a core material and/or a coating, wherein the core material and the coating, independently of each other, are made of a poly(oxyalkylene)-containing polymeric material, the method comprising: autoclaving the medical device in a solution containing a water-soluble and biocompatible organic multi-acid or biocompatible salt thereof in an amount sufficient to improve the stability of the poly(oxyalkylene)-containing polymeric material, so that the poly(oxyalkylene)-containing polymeric material has a decreased susceptibility to oxidative degradation characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products.
36. The method of claim 35, wherein wherein the biocompatible organic multi-acid is selected from the group consisting of hydroxy diacids, hydroxy triacids, olefinic diacids, olefinic tri-acids, and amino acids.
37. The method of claim 36, wherein the biocompatible organic multi-acid is an α -oxo-multi-acid.
38. The method of claim 37, wherein the α -oxo-multi-acid is selected from the group consisting of citric acid, 2-ketoglutaric acid, and malic acid.
39. The method of claim 38, wherein the solution has an osmolarity of from about 200 to 450 milli-osmole in 1000 ml (unit: mOsm/ml).
40. An aqueous solution for sterilizing and/or storing an ophthalmic device, wherein the ophthalmic device is made of a poly(oxyalkylene)-containing polymeric material, the aqueous solution having: a biocompatible organic multi-acid or biocompatible salt thereof in an amount sufficient to improve the stability of the poly(oxyalkylene)-containing polymeric material; an osmolarity of about 200 to 450 milli-osmole in 1000 ml (unit: mOsm/ml), wherein the aqueous solution is capable of improving the stability of the poly(oxyalkylene)-containing polymeric material, so that the poly(oxyalkylene)-containing polymeric material has a reduced susceptibility to oxidative degradation characterized by having at least an 1.5-fold reduction of the amount of detectable formic acid and optionally other degradation by-products.
41. The aqueous solution of claim 40, wherein the osmolarity of the aqueous solution is from about 250 to 350 mOsm/l.